

IN THE CLAIMS:

1. (Currently Amended) A method for immunoassay with a magnetic material labelled and a Superconducting Quantum Interference Device which comprises the following process:

(1) preparing an analyte to detect an antigen antibody reaction is labelled labeled with said magnetic material label by an antigen-antibody reaction,

(2) magnetizing the magnetic material label is magnetized on the analyte by a magnetic field thereby forming a magnetized magnetic material labeled analyte, and

(3) the magnetic material label magnetized by the magnetic field is detected by detecting the magnetized magnetic material labeled analyte by the Superconducting Quantum Interference Device which detects a variation of a strength of a the magnetic field which is at a right angle to the magnetic field which magnetizes the magnetic material label.

2. (Currently Amended) A method mentioned in claim 1, wherein said magnetic field used to magnetize the magnetic material label used in step (2) is a static magnetic field.

3. (Amended) A method mentioned in claim 1, wherein said Superconducting Quantum Interference Device detects variations of the strength of the magnetic field which occurs by moving the analyte labeled by the magnetized magnetic material label labeled analyte through the magnetic field used to magnetize the magnetic material label.

4. (Previously Amended) A method mentioned in claim 1, wherein the analyte moves parallel to the magnetic field which magnetizes the magnetic material label.

12. (Currently Amended) A method for immunoassay using a magnetic material label and a Superconducting Quantum Interference Device comprising the steps of:

(a) labeling preparing an analyte labeled with a said magnetic material label by an antigen-antibody reaction,

(b) magnetizing said magnetic material label on the analyte by applying a first magnetic field along a first direction thereby forming a magnetized magnetic material labeled analyte, and

(c) using said Superconducting Quantum Interference Device, detecting a variation of strength along a second direction perpendicular to said first direction of a second magnetic field from said caused by moving said magnetized magnetic material label labeled analyte through the first magnetic field along a second direction perpendicular to said first direction.

13. (Currently Amended) The method as recited in claim 12 wherein said first magnetic field along said first direction is a static magnetic field.

14. (Currently Amended) The method as recited in claim 12 wherein step (c) is performed while moving said labeled-and-magnetized-magnetic material label labeled analyte through said first magnetic field.

15. (Currently Amended) The method as recited in claim 14 wherein said step of moving is performed by moving said labeled-and-magnetized magnetic material labeled analyte in a direction parallel to said first direction.